

REMARKS

Claims 1-18 are pending. The Office Action dated November 22, 2005, in this Application has been carefully considered. The above amendments and the following remarks are presented in a sincere attempt to place this Application in condition for allowance. Claims 1, 6, 7, 12, 13, and 18 have been amended in this Response. Reconsideration and allowance are respectfully requested in light of the above amendments and the following remarks.

Claims 1-5, 7-11, and 13-17 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. More specifically, independent claim 1 was directed to a method of “improved” resource arbitration, and it was unclear to the Examiner what part of the claim was the improvement of the method. Claims 2-5 depend from claim 1. Similarly, independent claim 7 was directed to an apparatus for providing “improved” resource arbitration, and it was unclear to the Examiner what part of the claim was the improvement of the apparatus. Claims 8-11 depend from claim 7. In addition, independent claim 13 was directed to a computer program product providing “improved” resource arbitration, and it was unclear to the Examiner what part of the claim was the improvement of the computer program product. Claims 14-17 depend from claim 13.

In response thereto, Applicant notes that claims 1, 7, and 13 have been amended herein, and are no longer directed to methods, apparatus, or products providing “improved” resource arbitration. Applicant believes claims 1, 7, and 13, as amended herein, are in condition for allowance. Applicant also believes that claims 2-5 depending from claim 1, claims 8-11 depending from claim 7, and claims 14-17 depending from claim 13 are also in condition for allowance.

Claims 6, 12, 13, and 18 were rejected under 35 U.S.C. 102(b) as being anticipated by Chow et al. (US Patent No. 6,438,134). Applicant respectfully traverses this rejection.

Chow et al. does not teach or disclose a method of arbitrating between multiple resource access requests, wherein the method includes: defining four priority classes, managed high (MH), managed low (ML), opportunistic high (OH), and opportunistic low (OL); assigning a priority class to each of the resource access requests; determining whether OH priority class resource access requests are locked out; upon a determination that OH priority class resource access requests are locked out, temporarily changing a priority order used to arbitrate between the resource access requests to OH, OL, MH, and ML, in decreasing order of priority; determining whether OL priority class resource access requests are locked out; and upon a determination that OL priority class resource access requests are locked out, temporarily changing the priority order to MH, OL, OH, and ML, in decreasing order of priority. Accordingly, Chow et al. does not disclose all of the limitations of claims 6, 12, 13, and 18.

As amended herein, claim 6 recites:

6. A method of arbitrating between a plurality of resource access requests, the method comprising the steps of:

defining four priority classes, managed high (MH), managed low (ML), opportunistic high (OH), and opportunistic low (OL);

assigning a priority class to each of the resource access requests;

dividing the resource access requests into subgroups;

arbitrating between the resource access requests in each subgroup to obtain a smaller set of the

resource access requests, wherein the arbitrating comprises:

choosing one of the resource access requests using the priority order MH, ML, OH, and OL,

in decreasing order of priority;

determining whether OH priority class resource access requests are locked out;

upon a determination that OH priority class resource access requests are locked out,
temporarily changing the priority order to OH, OL, MH, and ML, in decreasing
order of priority;
determining whether OL priority class resource access requests are locked out;
upon a determination that OL priority class resource access requests are locked out,
temporarily changing the priority order to MH, OL, OH, and ML, in decreasing
order of priority; and
arbitrating between the resource access requests in the smaller set to obtain a single one of the
resource access requests.

Claims 12, 13, and 18, amended herein, include similar limitations.

Chow et al. discloses a method for servicing queues holding messages, such as ATM data packets, for subsequent processing or transmission to a resource such as a communications link having a finite processing capability. The method includes servicing each queue by forwarding messages of each queue to the resource at time intervals corresponding to a guaranteed service rate of the queue, provided the queue is non-empty. During time intervals when none of the queues have messages being forwarded to the resource, the queues are serviced in accordance with a proportion of a remaining or idle resource bandwidth allocated to each queue.

Applicant asserts Chow et al. does not teach or disclose a method of arbitrating between multiple resource access requests, wherein the method includes: defining four priority classes, managed high (MH), managed low (ML), opportunistic high (OH), and opportunistic low (OL), and assigning a priority class to each of the resource access requests. Chow et al. does not describe determining whether OH priority class resource access requests are locked out, and, upon a determination that OH priority class resource access requests are locked out, temporarily changing a priority order used to arbitrate between the resource access requests to OH, OL, MH, and ML, in

decreasing order of priority. Chow et al. does not disclose determining whether OL priority class resource access requests are locked out, and, upon a determination that OL priority class resource access requests are locked out, temporarily changing the priority order to MH, OL, OH, and ML, in decreasing order of priority.

Claims 6, 12, 13, and 18 were rejected under 35 U.S.C. 102(e) as being anticipated by Pham (US Patent No. 5,832,278). Applicant respectfully traverses this rejection.

Pham does not teach or disclose a method of arbitrating between multiple resource access requests, wherein the method includes: defining four priority classes, managed high (MH), managed low (ML), opportunistic high (OH), and opportunistic low (OL); assigning a priority class to each of the resource access requests; determining whether OH priority class resource access requests are locked out; upon a determination that OH priority class resource access requests are locked out, temporarily changing a priority order used to arbitrate between the resource access requests to OH, OL, MH, and ML, in decreasing order of priority; determining whether OL priority class resource access requests are locked out; and upon a determination that OL priority class resource access requests are locked out, temporarily changing the priority order to MH, OL, OH, and ML, in decreasing order of priority. Accordingly, Pham does not disclose all of the limitations of claims 6, 12, 13, and 18.

Claim 6, as amended herein, is recited above. Again, claims 12, 13, and 18, also amended herein, include similar limitations.

Pham discloses a two-level cascaded round robin arbiter, wherein the arbiter arbitrates between multiple requesters for a shared resource in a round robin fashion. The arbiter includes a series of first level arbiters which each receive a group of the plurality of requesters and select one requester in each group in a round robin manner. The first level arbiters operate in parallel to select

their one requester, and provide their selected requester to a second level arbiter which selects one group's selected requester to award use of the shared resource. The second level arbiter selects from among the groups in a round robin manner (subject to an indication of a wrap condition provided by each of the first level arbiters to the second level arbiter).

Applicant asserts Pham does not teach or disclose a method of arbitrating between multiple resource access requests, wherein the method includes: defining four priority classes, managed high (MH), managed low (ML), opportunistic high (OH), and opportunistic low (OL), and assigning a priority class to each of the resource access requests. Pham does not describe determining whether OH priority class resource access requests are locked out, and, upon a determination that OH priority class resource access requests are locked out, temporarily changing a priority order used to arbitrate between the resource access requests to OH, OL, MH, and ML, in decreasing order of priority. Pham does not disclose determining whether OL priority class resource access requests are locked out, and, upon a determination that OL priority class resource access requests are locked out, temporarily changing the priority order to MH, OL, OH, and ML, in decreasing order of priority.

In the Office Action, the Examiner noted that claims 1-5, 7-11, and 13-17, would be allowable if rewritten or amended to overcome the rejection under 35 U.S.C. 112, second paragraph.

In the present response, Applicant addresses all of the claim objections and rejections cited in the Office Action. In view of the amendments to the claims and Applicant's remarks, Applicant believes pending claims 1-18 are in condition for allowance, and respectfully request allowance of pending claims 1-18.

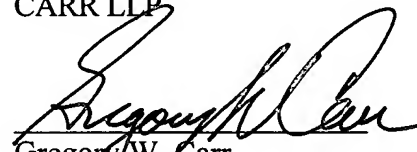
With the amendments to the claims presented herein, there are currently 6 pending independent claims and 18 total pending claims in the application. As the original application had 6

independent claims and 18 total claims, Applicant believes no additional fees are due. In the event that any other fees are due, the Commissioner is hereby authorized to charge any required fees due (other than issue fees), and to credit any overpayment made, in connection with the filing of this paper to Deposit Account No. 50-0605 of CARR LLP.

The present amendment is believed to contain a complete response to the issues raised in the Office Action. Full reconsideration is respectfully requested. If the Examiner should have any questions, comments or suggestions, the undersigned attorney earnestly requests a telephone conference. In particular, should the Examiner deem that any further amendment is desirable to place this application in condition for allowance, the Examiner is also invited to telephone the undersigned at the number listed below.

Respectfully submitted,

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ATTORNEY DOCKET NO.
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Amendments To The Drawings

No amendments have been made to the drawings.